

Claims

1. (presently amended) A method for manufacturing a slider comprising the steps of:

applying a liquid solution of a first solvent and polyvinyl alcohol to the slider;

drying the slider to remove the first solvent from the liquid solution leaving a polyvinyl alcohol film on the slider;

binding the slider in a matrix material with the polyvinyl alcohol film being in contact with the matrix material;

performing a selected process on the slider while the slider is held in the matrix material; and

removing the matrix material and the polyvinyl alcohol film from the slider by a method including use of a second solvent to soften the polyvinyl alcohol film.

2. (previously presented) The method of claim 1 wherein the matrix material and the polyvinyl alcohol film are resistant to a third solvent and the selected process forms an air-bearing pattern and includes use of the third solvent.

3. (original) The method of claim 1 wherein the polyvinyl alcohol has a percentage hydrolysis of about 95% or greater.

4. (original) The method of claim 1 wherein the polyvinyl alcohol has a percentage hydrolysis of about 99% or greater.

5. (original) The method of claim 1 wherein the matrix material is an epoxy, acrylate, polyimide or silsesquioxane.

6. (previously presented) The method of claim 1 wherein the polyvinyl alcohol has a molecular weight of about 124,000 to about 180,000 daltons.

7. (previously presented) The method of claim 1 wherein the first solvent comprises isopropanol.
8. (previously presented) The method of claim 2 wherein the first solvent comprises isopropanol and water.
9. (original) The method of claim 1 wherein the step of drying the slider further comprises baking at a first temperature followed by baking at a second temperature where the second temperature is higher than the first temperature.
10. (previously presented) The method of claim 1 wherein the second solvent comprises hot n-methyl-2-pyrrolidone.
11. (previously presented) The method of claim 1 wherein the second solvent comprises dimethylpropyl urea.
12. (previously presented) The method of claim 1 wherein the second solvent comprises boiling water.
13. (previously presented) A method for manufacturing sliders for use in disk drives comprising the steps of:
- attaching the sliders to a support surface;
 - applying polyvinyl alcohol in a solution comprising water to the sliders;
 - drying the sliders leaving a coating of polyvinyl alcohol on the sliders;
 - binding the sliders in a solid material which is resistant to a first solvent and to processing conditions of a selected photolithographic process;
 - using the selected photolithographic process to form air-bearing features on a surface of the sliders; and
 - applying a second solvent to soften the coating of polyvinyl alcohol to aid in removing the solid material from the sliders.

14. (original) The method of claim 13 wherein the polyvinyl alcohol has a percentage hydrolysis of about 95% or greater.
15. (original) The method of claim 13 wherein the matrix material is an epoxy, acrylate, polyimide or silsesquioxane.
16. (previously presented) The method of claim 13 wherein the polyvinyl alcohol has a molecular weight of about 124,000 to about 180,000 daltons.
17. (original) The method of claim 13 wherein the solution of polyvinyl alcohol comprises isopropanol.
18. (original) The method of claim 13 wherein the step of drying the slider further comprises baking at a first temperature followed by baking at a second temperature where the second temperature is higher than the first temperature.
19. (original) The method of claim 13 wherein the second solvent comprises hot n-methyl-2-pyrrolidone.
20. (original) The method of claim 13 wherein the second solvent comprises dimethylpropyl urea.
21. (original) The method of claim 13 wherein the second solvent comprises boiling water.